

Modeling of forming technological errors in processing by gear shaping machine

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Abstract

© Published under licence by IOP Publishing Ltd. In the paper, the mathematical model for evaluation the accuracy of the cut gear depending on the initial error of the technological system, is presented. The model is based on the coordinate transformation matrices, variations matrices and considers the deviations of the base and the real surfaces. The technique allows evaluating the possibilities of the technological system to achieve the specified accuracy.

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Keywords

Error, Gear, Mathematical model, Parametric failure, Technological reliability

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